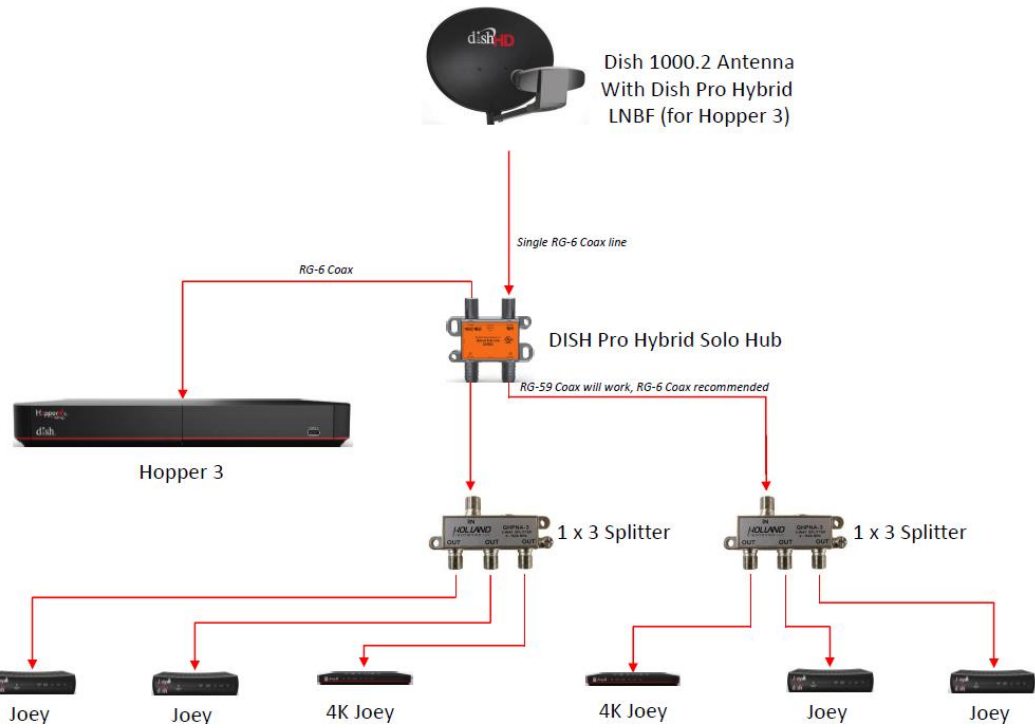# EXHIBIT L

U.S. Patent No. 10,257,566 ("the '7,566 Patent") Exemplary Infringement Chart

The Accused MoCA Instrumentalities are instrumentalities that DISH deploys to provide a whole-premises DVR network over an on-premises coaxial cable network, with DISH "Hopper" and "Joey" nodes operating with data connections compliant with MoCA 1.0, 1.1, and/or 2.0. The Accused MoCA Instrumentalities include the DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, DISH Hopper 3, DISH 4K Joey, and DISH Joey 3, and substantially similar instrumentalities. DISH literally and/or under the doctrine of equivalents infringes the claims of the '7,566 Patent under 35 U.S.C. § 271(a) by making, using, selling, offering for sale, and/or importing the Accused MoCA Instrumentalities.

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11. A communication circuit comprising:	The Accused Services are provided using at least the Accused MoCA Instrumentalities including the DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, DISH Super Joey, DISH Hopper 3, DISH 4K Joey, and DISH Joey 3, and devices that operate in a similar manner. The Accused MoCA Instrumentalities constitute a communication circuit and are operate to form a coaxial cable network over an on-premises coaxial cable network as described below. The DISH full-premises DVR network constitutes a coaxial cable network as claimed. The DISH full-premises DVR network is a MoCA network created between at least one Hopper DVR and one or more Joey receivers using the on-premises coaxial cable network. This MoCA network is compliant with MoCA 1.0, 1.1, and/or 2.0. "The MoCA system network model creates a coax network which supports communications between a convergence layer in one MoCA node to the corresponding convergence layer in another MoCA node." (MoCA 1.0, Section 1. *See also* MoCA 1.1, Section 1.1; MoCA 2.0, Section 1.2.2)

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	"The MoCA Network transmits high speed multimedia data over the in-home coaxial cable infrastructure." (MoCA 1.0, Section 2. *See also* MoCA 1.1, Section 2; MoCA 2.0, Section 5) DISH utilizes the MoCA standard to provide an on-premises DVR network over an on-premises coaxial cable network as described below: DISH PRO HYBRID SOLO HUB: This Solo Hub is a home video network device

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	that combines multi-orbital coaxial cable satellite feeds from a DISH 1000.2 antenna or switch into a single-cable coaxial satellite feed to support MoCA networking for the Hopper 3 DVRs (host). The client ports are intended to feed up to 6 Joey client receivers (clients). The Solo Hub creates a MoCA video network for Hopper DVRs and Joeys. Rated 50 MHz to 3 GHz. SPLITTERS: 1 GHz common splitters can be used to feed Joey client receivers. HOPPER 3: The Hopper 3 is the revolutionary whole-home DVR from DISH that includes 16 satellite tuners and a 2TB hard drive. JOEY: The Joey is the MoCA thin-client receiver that networks with the Hopper for viewing on additional TVs. 4K JOEY: The 4K Joey is an option for installation on additional 4K TVs. DISH PRO HYBRID 42 SWITCH: This switch allows two Hopper 3 DVRs to be installed using a single DISH traditional 1000.2 antenna. Each Hopper 3 forms its own MoCA video network with connected Joeys. The switch comes with a 110VAC power supply unit.

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	Your new Hopper® 3 receiver is a Whole-Home HD DVR that offers full digital video recording functionality, including pausing live TV, to every TV in your house that is part of your Whole-Home DVR system. The Hopper 3 receiver is the hub for all things entertainment. It is an HD DVR that provides the equivalent of 16 tuners, allowing you to record multiple HD channels at once and at any time and play them back in any room in your home. Using the PrimeTime Anytime® feature, you can record up to six HD channels simultaneously (with your local ABC, CBS, FOX and NBC channels provided in HD, which may not be available in all markets). It is one HD DVR that works independently on as many as four different TVs at the same time, so everyone can be in different room watching their favorite TV programming. Joey® receivers (Joey®, SuperJoey®, Wireless Joey®, 4K Joey™) connect to other TVs in your home and link to the Hopper 3 system, creating a Whole-Home DVR network. It supports all of the features of the Hopper 3 (with the exception of Picture-In-Picture) and offers an identical user interface as the Hopper 3. You can connect a Joey receiver to a high-definition or standard-definition TV.

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	CONNECTING THE JOEY RECEIVER(S)
	
	This section describes how to connect the receiver's HOME VIDEO NETWORK connection to one or more cable-ready remote TV(s) located in other room(s) away from the Hopper. You can use these instructions to connect TVs in your home to see live and recorded programming from the Hopper. This installation uses your in-home coaxial cable system. If your home does not have built-in cabling, it will be necessary to run these cables from the Hopper HD DVR to each Joey Receiver conected to a remote TV. Due to the potential complexity of this installation, you should have this professionally installed. Call the DISH Customer Service Center at 1-800-333-DISH (3474) for more information.
	
	If you need another remote control, be sure to order the replacement remote control kit for Hopper and Joey that uses UHF-2G signals. Call your DISH retailer, or visit www.mydish.com online, select Upgrades, then Products, and click on Remote & Accessories.
	
	1 Connect the HOME VIDEO NETWORK output on the back of the Hopper HD DVR to an existing wall cable outlet using a coaxial cable.
	
	2 Connect the Joey Receiver(s) in other room(s) to existing wall cable outlet(s) using coaxial cable(s).
	
	3 Connect the Joey Receiver(s) to an audio/video input of the remote TV in each room.
	
	   • If it is a high-definition TV or monitor and an HDMI connection is available on the remote TV, use a single HDMI cable from the output on the back of the Joey Receiver to provide high-quality audio and HD/SD video. See page 94.
	   • If it is a standard-definition TV or an HDMI connection is not available on the remote TV, use composite (yellow) video and stereo audio cables from the outputs on the back of the Joey Receiver. See page 95.
	
	4 Turn on every Joey Receiver and remote TV connected to the in-home cabling system. If you have not already done so, you may need to pair a remote control to each Joey.
	
	5 Follow the on-screen prompts or included instructions for linking each Joey Receiver to your Hopper HD DVR. (The Hopper is the host for DISH Whole-Home DVR services.)
	
	6 Confirm that you see a picture from your Joey Receiver(s) on your remote TV(s).
	
	   • If your picture looks good, then you are finished with this procedure.
	   • If your TVs do not display a picture or if the picture is not as clear as you would like it to be, repeat the steps to confirm all the connections. Coaxial connections should be hand-tightened.

a controller that is operable to, at least:	The Accused MoCA Instrumentalities constitute a controller as described below.

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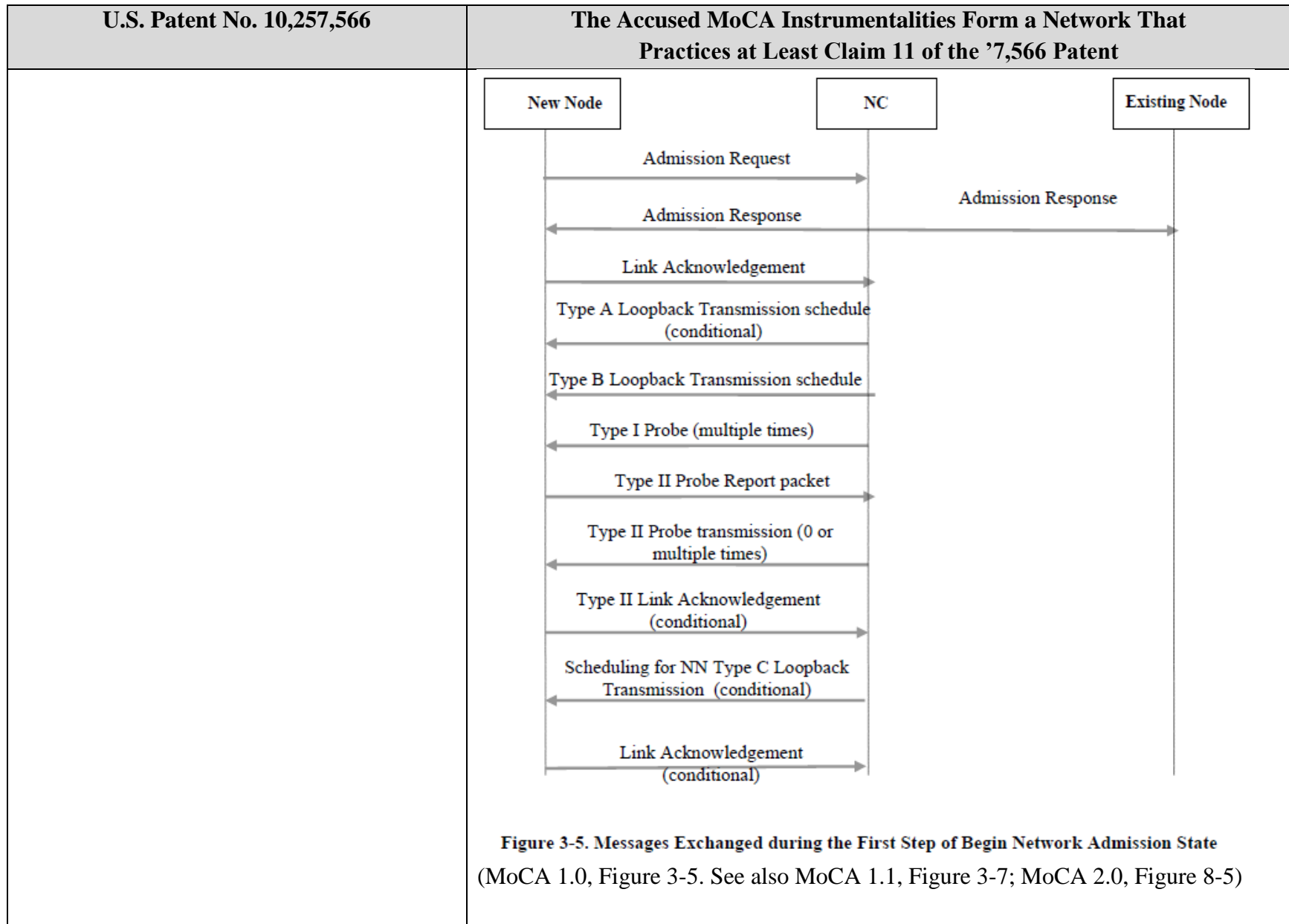| U.S. Patent No. 10,257,566	The Accused MoCA Instrumentalities Form a Network That Practices at Least Claim 11 of the '7,566 Patent
	For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules constituting a controller. "Network Coordinator (NC) – A MoCA node that performs the following salient functions in a MoCA Network: Beacon generation, MAP generation, admission of new MoCA nodes to the network, privacy key generation and distribution, and LMO scheduling." (MoCA 1.0, Section 1.2. See also MoCA 1.1, Section 1.2, MoCA 2.0, Section 3)
transmit first information on a Coaxial Cable Network (CCN), the first information comprising information indicating when admission messages may be transmitted on the CCN;	The Accused MoCA Instrumentalities operate to transmit first information on a Coaxial Cable Network (CCN), the first information comprising information indicating when admission messages may be transmitted on the CCN as described below. For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that transmit first information on a Coaxial Cable Network (CCN), the first information comprising information indicating when admission messages may be transmitted on the CCN. "Beacon signal is used by new nodes to find and join a MoCA Network." (MoCA 1.0, Section 3.1. See also MoCA 1.1, Section 3.1, MoCA 2.0, Section 8.3.2) "In a MoCA Network, the NC is responsible for Beacon transmissions. The Beacon transmissions are used by new nodes to detect presence of a network and to get admitted to a network."

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	(MoCA 1.0, Section 3.3. See also MoCA 1.1, Section 3.3, MoCA 2.0, Section 7.1.1) "The NC MUST transmit Beacons using Diversity Mode with transmit power setting reduced by Beacon Backoff from the Node's maximum transmit power. The Beacons MUST be transmitted unencrypted." (MoCA 1.0, Section 3.3. See also MoCA 1.1, Section 3.3, MoCA 2.0, Section 7.1.1) "The Beacon MUST include pointer fields that inform the recipient nodes about upcoming MAC Control transmissions. Pointers to the next Beacon transmission (NEXT_BEACON_POINTER) and the next Asynchronous MAP transmission (ASYNCHRONOUS_MAP_POINTER) are needed by new nodes and they also help all nodes with robust recovery when one of these control packets is lost. The ACF_POINTER points to the time instant of an upcoming Admission Control Frame. This information is needed for new nodes to go through the admission process." (MoCA 1.0, Section 3.3.1. See also MoCA 1.1, Section 3.3.1, MoCA 2.0, Section 7.1.1) "The NC and a new node (NN) use Admission Control Frames (ACF) to communicate during the network admission process which occurs prior to modulation profiling." (MoCA 1.0, Section 3.3.2. See also MoCA 1.1, Section 3.3.2, MoCA 2.0, Section 7.1.2) "When no NN is being admitted to the network, the NC MUST schedule ACF transmissions of type "Admission Request" every Beacon period so that nodes have sufficiently frequent opportunities to join the network. These "Admission Request"

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	ACF's are contention opportunities for a NN to begin the process of network admission." (MoCA 1.0, Section 3.3.2. See also MoCA 1.1, Section 3.3.2, MoCA 2.0, Section 7.1.1)
receive an admission message from a new node;	The Accused MoCA Instrumentalities operate to transmit first information on a Coaxial Cable Network (CCN), the first information comprising information indicating when admission messages may be transmitted on the CCN as described below. For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that transmit first information on a Coaxial Cable Network (CCN), the first information comprising information indicating when admission messages may be transmitted on the CCN. "To start the admission process, a new node MUST first locate and decode beacon transmissions of an existing network, synchronize to the time base used in the network it wants to join, locate the time allocated in a beacon for transmitting Admission Request and send an Admission Request packet within that time." (MoCA 1.0, Section 3.6. See also MoCA 1.1, Section 3.6, MoCA 2.0, Section 8.3.4) "The NC MUST start an admission timer T2 when it responds to the admission request by sending an admission response described in 3.6.1.2. At any time during the node admission process if T2 expires, the NC MUST abandon the node admission, and change the Link Control State to Steady State." (MoCA 1.0, Section 3.6. See also MoCA 1.1, Section 3.6, MoCA 2.0, Section 8.3.4)

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if the received admission message is correctly received and the new node is authorized to join the CNN, then perform an admission procedure with the new node by, at least in part, operating to:	The Accused MoCA Instrumentalities operate to perform an admission procedure with the new node if the received admission message is correctly received and the new node is authorized to join the CNN as described below. For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that perform an admission procedure with the new node if the received admission message is correctly received and the new node is authorized to join the CNN. "When NC receives an Admission Request, it MUST begin to initiate Begin Node Admission Link Control state in the asynchronous MAPs." (MoCA 1.0, Section 3.6.1. See also MoCA 1.1, Section 3.6.1, MoCA 2.0, Section 8.3.4.1.1) "The NN MUST monitor for a response from the NC. If no response is received for N4 beacon periods, the NN MUST use a backoff mechanism before it retries sending Admission Request again." (MoCA 1.0, Section 3.6.1.1. See also MoCA 1.1, Section 3.6.1.1, MoCA 2.0, Section 8.3.4.1.1) "A node wishing to join the network MUST only use the Admission Request transmission period (indicated in beacon by ACF_TYPE = 0x0) to send an Admission Request Frame to the NC. The node MUST fill in all fields as shown in Table 3-4. The new node (NN) MUST use Diversity Mode to send this request." (MoCA 1.0, Section 3.6.1.1. See also MoCA 1.1, Section 3.6.1.1, MoCA 2.0, Section 8.3.4.1.1)

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	"In order to prevent admission requests from disadvantaged nodes (see Section 8.1.5) from hindering link maintenance operations, the NC must keep track of how many consecutive times there is an admission failure due to being disadvantaged (based on MAC addresses). When the failure count reaches N10, the NC MUST ignore all future admission requests from the disadvantaged node until link maintenance has been performed on all Admitted nodes (including itself)." (MoCA 1.0, Section 3.6.9. See also MoCA 1.1, Section 3.6.9, MoCA 2.0, Section 16.2.1) "The NC node MUST not admit a node and MUST drop off any nodes which have a modulation profile with NBAS < 358 bits per ACMT symbol between it and the NC node. Such a node is referred to as a disadvantaged node." (MoCA 1.0, Section 8.1.5. See also MoCA 1.1, Section 8.1.5, MoCA 2.0, Section 16.2.1)
probe a communication link of the CCN connecting the communication circuit to the new node; and	The Accused MoCA Instrumentalities operate to probe a communication link of the CCN connecting the communication circuit to the new node as described below. For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that probe a communication link of the CCN connecting the communication circuit to the new node. "A variety of physical layer frequency-domain and time-domain probes are used to create modulation profiles, optimize performance, and allow for various calibration mechanisms. Type I Modulation Profile Probes are frequency domain probes used to determine modulation profiles of the channel between any two nodes. Type II Probes are frequency domain probes consisting of two tones that may be used to fine tune

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	performance. A Type III Echo Profile Probe may be used to determine the impulse response of the channel. This information can be used to optimize various physical layer parameters. In addition to the above probes, this specification provides opportunities for various unique Loopback Transmissions which may be useful for RF calibration, among other things." (MoCA 1.0, Section 2.2. See also MoCA 1.1, Section 2.2; MoCA 2.0, Section 5.2)

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	Figure 3-5. Messages Exchanged during the First Step of Begin Network Admission State (MoCA 1.0, Figure 3-5. See also MoCA 1.1, Figure 3-7; MoCA 2.0, Figure 8-5)

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	"In the beacon period after the Type B Loopback Transmission opportunity, the NC MUST schedule and transmit a Type I Probe to the NN." (MoCA 1.0, Section 3.6.1.9. See also MoCA 1.1, Section 3.6.1.9, MoCA 2.0, Section 8.3.4.1.6) "A receiving node processes this [Type I: Modulation Profile Probe] to generate a modulation profile of QAM constellations. The modulation profile is transmitted back to the node that generated the probe so that the node knows which modulation profile to select when transmitting to that receiving node (for a description of PHY probe processing by the MAC see Section 3.13)." (MoCA 1.0, Section 4.5.1. See also MoCA 1.1, Section 4.5.1, MoCA 2.0, Section 8.3.4.1.10) "There are three types of Probe Reports corresponding to the three Probe types. The Type I Probe Report is described in Section 3.6.3.2, the Type II Probe Report is described in Section 3.6.1.10, and the Type III Probe Report is described in Section 3.7.2.5." (MoCA 1.0, Section 3.13.3. See also MoCA 1.1, Section 3.13.3, MoCA 2.0, Section 8.3.4.1.7) "The Type I Probe Report conveys critical information about channel conditions such as Modulation Profile and Power Control. The calculated parameters of this report are derived from Type I and optionally from Type III Probes and are described in Table 3-27. These parameters are to be used in future transmissions to the node that sent the report." (MoCA 1.0, Section 3.13.3.1. See also MoCA 1.1, Section 3.13.3.1, MoCA 2.0, Section 8.3.4.1.7)

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adapt transmission parameters for the communication link based, at least in part, on the probe.	The Accused MoCA Instrumentalities operate to adapt transmission parameters for the communication link based, at least in part, on the probe as described below. For example, by virtue of their compliance with MoCA, the Accused MoCA Instrumentalities include circuitry and/or associated software modules that adapt transmission parameters for the communication link based, at least in part, on the probe. "A variety of physical layer frequency-domain and time-domain probes are used to create modulation profiles, optimize performance, and allow for various calibration mechanisms. Type I Modulation Profile Probes are frequency domain probes used to determine modulation profiles of the channel between any two nodes. Type II Probes are frequency domain probes consisting of two tones that may be used to fine tune performance. A Type III Echo Profile Probe may be used to determine the impulse response of the channel. This information can be used to optimize various physical layer parameters. In addition to the above probes, this specification provides opportunities for various unique Loopback Transmissions which may be useful for RF calibration, among other things." (MoCA 1.0, Section 2.2. See also MoCA 1.1, Section 2.2; MoCA 2.0, Section 5.2) "A receiving node processes this [Type I: Modulation Profile Probe] to generate a modulation profile of QAM constellations. The modulation profile is transmitted back to the node that generated the probe so that the node knows which modulation profile to select when transmitting to that receiving node (for a description of PHY probe processing by the MAC see Section 3.13)." (MoCA 1.0, Section 4.5.1. See also MoCA 1.1, Section 4.5.1, MoCA 2.0, Section 8.3.4.1.10)

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